

REMARKS

The Official Action mailed April 21, 2004, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for Two Month Extension of Time*, which extends the shortened statutory period for response to September 21, 2004. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on June 2, 1999, March 31, 2000, June 21, 2000, July 30, 2001, February 15, 2002, April 18, 2002, October 28, 2002, November 21, 2002, January 3, 2003, July 1, 2003, and December 16, 2003.

Claims 1-80 are pending in the present application, of which claims 1, 10, 19, 32, 45 and 68 are independent. Claims 1, 10, 19, 32, 45 and 68 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 2 of the Official Action rejects claims 1-80 as obvious based on the combination of JP 02-234134 to Sumiyoshi et al. and U.S. Patent No. 4,581,620 to Yamazaki et al. The Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some

teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. The independent claims have been amended to recite an active matrix liquid crystal display device having a pixel circuit and a driving circuit which are formed over a substrate, and a thin film transistor formed in the pixel circuit. The independent claims already recite that the thin film transistor has a semiconductor layer, and that the semiconductor layer has a semi-amorphous structure in which Si-Si bonds anchor clusters. Sumiyoshi and Yamazaki '620, either alone or in combination, do not teach or suggest at least the above-referenced features of the present invention. Since Sumiyoshi and Yamazaki '620 do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Furthermore, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Sumiyoshi and Yamazaki '620 or to combine reference teachings to achieve the claimed invention.

The Official Action concedes that "Sumiyoshi does not disclose a semi-amorphous structure in which Si-Si bonds anchor clusters" (page 2, Paper No. 20040416). The Official Action asserts that "it would have been obvious ... to have a semi-amorphous structure in order to have a semiconductor layer with excellent properties (Id.). The Applicants respectfully disagree and traverse the above assertions in the Official Action.

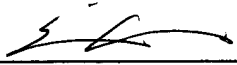
The alleged motivation to combine Sumiyoshi and Yamazaki '620 does not apply to the independent claims, as amended. Specifically, Yamazaki '620 teaches that a semiconductor device having a semi-amorphous semiconductor film has a higher degree of photoelectric conversion efficiency (column 1, lines 30-42) and is applied to a photoelectric conversion element (Id., and column 13, lines 9-38). Sumiyoshi and Yamazaki '620 do not teach or suggest how or why it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the semi-amorphous semiconductor film of Yamazaki '620 to a pixel circuit or a driving circuit of an active matrix liquid crystal display device.

In the present application, it is respectfully submitted that the prior art of record, alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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